CLAIMS

1/ Multimers built up from recombinant proteins analogues of class I MHC, characterized in that the proteins comprise at least one modification in the zone of interaction of a heavy chain with the CD8 co-receptor of T lymphocytes leading to a reduction, or even suppression of the affinity of the interaction between the heavy chain and CD8.

2/ Multimers according to claim 1, characterized in that the modification relates to the α3 domain of the heavy chain.

3/ Multimers according to claim 1 or 2, characterized in that the modification corresponds to a mutation in the α3 domain of at least one amino acid, with respect to the corresponding domain of a native heavy chain capable of binding to the said CD8 co-receptor.

4/ Multimers according to claim 1 or 2, characterized in that the modification corresponds to chemical modification of at least one amino acid of the α3 domain of a heavy chain, with respect to the corresponding domain of a native heavy chain capable of binding to the said CD8 co-receptor.

5/ Multimers according to claim 1 or 2, characterized in that the modification corresponds to the deletion of at least one amino acid of the α3 domain of a heavy chain, with respect to the corresponding domain of a native heavy chain capable of binding to the said CD8 co-receptor.

6/ Multimers according to any one of claims 1 to 5, characterized in that they are in the form of complexes with antigenic peptides.

7/ Multimers according to claim 6, characterized in that they are in the form of tetramers.

8/ Use of multimers according to claim 6 or 7 for the purpose of detection and/or isolation of peptide-specific CD8+ T lymphocyte populations.

9/ Use according to claim 8 in a process for cell screening, such as immunomagnetic screening.

10/ Method for the detection of peptide-specific CD8+ T lymphocyte populations from a polyclonal population, characterized in that it comprises:

- bringing the polyclonal population into contact with multimers complexed with antigenic peptides according to claim 6 or 7 under conditions which allow interaction between the modified class I MHC/peptide complexes and T lymphocyte receptors which have an affinity for the said complexes,
- visualization of the lymphocyte populations which are bound to the said complexes.

11/ Method for isolation of peptide-specific CD8+ T lymphocyte populations from a polyclonal population, characterized in that it comprises:

- bringing the polyclonal population into contact with magnetic beads on which are bound the peptide/class I CMH analogue complexes according to claim 6 or 7 under conditions which allow interaction between the said complexes and T lymphocyte receptors which have an affinity for the said complexes,
- recovery of the bound populations, the screening operation being repeated, if desired, and/or followed, where appropriate, by a stage

- of *in vitro* amplification of the populations selected.

12/ Lymphocyte populations which have been selected and, where appropriate, amplified, characterized in that they are made up exclusively of T lymphocytes which are reactive towards the peptide of a complex with multimers according to claim 6 or 7.

13/ Pharmaceutical compositions which can be used, in particular, in immunotherapy, characterized in that they are built up from a lymphocyte population according to claim 12 in combination with a pharmaceutically inert vehicle.